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| APPLICATION NO.                                 | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/708,155                                      | 02/12/2004  | Cheng-Kuang Lee      | ACMP0076USA         | 2154             |
| 27765   | 7590        | 12/30/2005           | EXAMINER            |                  |
| NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION |             |                      | SEVER, ANDREW T     |                  |
| P.O. BOX 506                                    |             |                      | ART UNIT            | PAPER NUMBER     |
| MERRIFIELD, VA 22116                            |             |                      | 2851                |                  |

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/708,155

Applicant(s)

LEE ET AL.

Examiner

Andrew T. Sever

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,13-17,21 and 22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,13-17,21 and 22 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/17/2005 has been entered.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 15, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Toshiba (JP 2000181376 A.)

4. Toshiba teaches in figure 1 a light source comprising:

A prism (30) for redirecting light, a cross section of the prism having a triangular shape, and the prism comprising first (30a), second (30b), and third optical planes (30c); and

First and second beam generators (1a and 1b respectively) for generating light beams and projecting the light beams to the optical planes, wherein light beams from the first beam generator (1a) enter the prism through the first optical plane (30a), are totally reflected at the second optical plane (30b), and leave the prism through the third optical plane (30c follow light beam 3a which is shown to be internally reflected at the second optical plane), light beams from the second beam generator (1b) enter the prism through the second optical plane (30b), are totally reflected at the first optical plane (30a), and leave the prism through the third optical plane (30c, follow light beam 3b), and the light beams leaving the third optical plane combine to form an enhanced light beam.

*With regards to applicant's claim 15:*

The beam generators comprise of a light device (1a) and a light collector (11A)

*With regards to applicant's claim 21:*

The prism is formed as a monolithic structure.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 13, 14, 16, 17, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshiba as applied to claims 1, 15, and 21 above, and further in view of Butterworth et al. (US 6,005,722.)

Toshiba as described in more detail above teaches a light source, which among other things includes a prism for redirecting the light from first and second beam generators. Toshiba teaches in figure 3 that this light source is utilized in a projector, however the projector does not include a light pipe for uniformizing light received from the light source and a color wheel, rather Toshiba utilizes a plurality of transmissive image devices (16a, 16b, and 16c) and dichroic mirrors for directing the light to each respective image

device. Butterworth teaches in column 1 that such imagers are more expensive and do not have as good of performance as reflective imagers. Butterworth teaches in column 2 that when utilizing reflective imagers, the use of a color wheel and a light pipe allows for a better image and also allows for the use of multiple light sources. Butterworth teaches in figure 1 the makeup of such a projector (in the embodiment of figure 1 only 1 light source is provided, however as will be stated the light source will be replaced with that of Toshiba) which comprises the light source (12), a color wheel (14), a light pipe (36), an imager (18), and a projection lens (28) among other things. Given the superior performance of reflective imagers and the teachings by Butterworth of the need for the color wheel and light pipe when using such an imager; it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Butterworth's imaging core (the above described parts specifically the light pipe as is claimed in applicant's claims 13 and 16 and color wheel as claimed in applicant's claims 14 and 17) with the light source of Toshiba so that a better projected image can be obtained.

*With regards to applicant's claims 16 and 22:*

See the above 102(b) rejection based on Toshiba for those parts not specifically outlined above discussion.

Art Unit: 2851

*Response to Arguments*

8. Applicant's arguments with respect to claims 1, 13-17, 21, and 22 have been considered but are moot in view of the new ground(s) of rejection.

The Satou reference has been replaced with the Toshiba reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AS

**William Perkey**  
**Primary Examiner**